

REMARKS

This Response Accompanying an RCE is intended as a full and complete response to the Final Office Action dated May 4, 2006 and Advisory Action dated July 19, 2006, having a shortened statutory period for response set to expire on August 4, 2006. In view of the following amendment and discussion, the Applicants believe all claims are in allowable form.

CLAIM REJECTIONS

A. 35 U.S.C. §102 Claims 1-2, 4-6, 8-16 and 21-22

Claims 1-2, 4-6, 8-16 and 21-22 stand rejected under 35 U.S.C. §102(b) as being anticipated or under 35 U.S.C. §103(a) as unpatentable over United States Patent No. 6,159,297 issued December 12, 2000 to *Herchen, et al.* (hereinafter referred to as "*Herchen*"). In response, the Applicants have amended claims 1, 5, 16 and 19 to more clearly recite certain aspects of the invention.

Independent claims 1, 5 and 16 recite elements not taught or suggested by *Herchen*. *Herchen* teaches using an interferometer to determine a thickness of a transparent layer on a substrate. The interferometer 175 is coupled to the chamber 15 through a window 170 from an optical source 185. However, *Herchen* does not teach or suggest an endpoint detection system disposed in a substrate support member, as recited by claims 1 and 16, or an endpoint detection system disposed at least partly through a portion of a ceiling and configured to detect one or more test patterns disposed on the photomask substrate, as recited by claim 5.

"Anticipation requires the presence in a single prior art reference disclosure of each and every element of the claimed invention, arranged as in the claim." *Lindemann Maschinenfabrik GmbH v. American Hoist & Derrick Co.*, 730 F.2d 1452, 221 USPQ 481, 485 (Fed. Cir. 1984)(citing *Connell v. Sears, Roebuck & Co.*, 722 F.2d 1542, 220 USPQ 193 (Fed. Cir. 1983). Here, *Herchen* fails to teach or suggest an endpoint detection system disposed at least partly through a portion of a ceiling, as recited by claim 1, or an endpoint detection system disposed through a substrate support member, as recited by claims 1 and 16. As *Herchen* fails to teach or suggest each and every

elements of the claimed invention, the Applicants submit that the present invention is patentable over *Herchen*.

Thus, Applicant submits that independent claims 1, 5, and 16 and all claims depending therefrom are patentable over *Herchen*. Accordingly, the Applicant respectfully requests the rejection be withdrawn.

B. 35 U.S.C. §102 Claims 1-2, 4-14, 16, 18 and 21-22

Claims 1-2, 4-14, 16, 18 and 21-22 stand rejected under 35 U.S.C. §102(b) as being anticipated or under 35 U.S.C. §103(a) as unpatentable over Japan Patent No. 2001217227 to *Yohei Yamazawa, et al.* (hereinafter referred to as "*Yamazawa*"). In response, the Applicants have amended claims 1, 5, 16 and 19 to more clearly recite certain aspects of the invention.

Independent claims 1, 5 and 16 recite elements not taught or suggested by *Yamazawa*. *Yamazawa* teaches measuring thickness difference of a gate oxide layer disposed on a substrate by an endpoint detection system to predict an endpoint of an etch process. *Yamazawa* does not teach or suggest an endpoint detection system disposed at least partly through a portion of a ceiling and configured to detect one or more test patterns disposed on the photomask substrate, as recited by claim 5. Also, *Yamazawa* does not teach or suggest an endpoint detection system disposed through a substrate support member, as recited by claims 1 and 16. As such, *Yamazawa* does not teach or suggest a modification to *Herchen* that would yield an endpoint detection system disposed at least partly through a portion of a ceiling and configured to detect one or more test patterns disposed on the photomask substrate, as recited by claim 5, or an endpoint detection system disposed in a substrate support member, as recited by claims 1 and 16. As such, a *prima facie* case of obviousness has not been established as the references fail to teach or suggest all the claimed elements.

Thus, Applicant submits that independent claims 1, 5, and 16 and all claims depending therefrom are patentable over *Yamazawa*. Accordingly, the Applicant respectfully requests the rejection be withdrawn.

C. 35 U.S.C. §103 Claims 3, 17 and 19-20

Claims 3, 17 and 19-20 stand rejected under 35 U.S.C. §103(a) as unpatentable over *Herchen* in view of Japan Patent No. 11058225 to *Mihashi, et al.* (hereinafter referred to as "*Mihashi*"). In response, the Applicants have amended claims 1, 16 and 19 to more clearly recite aspects of the invention.

Independent claims 1 and 16 recite elements not taught or suggested by the combination of *Herchen* and *Mihashi*. The teaching of *Herchen* has been discussed above. *Mihashi* teaches using an endpoint detector disposed in a center portion of a polishing platen in a chemical mechanical process tool to measure thickness difference of a layer in a chemical mechanical process. *Mihashi* does not teach or suggest an endpoint detection system disposed through a substrate support member, as recited by claims 1 and 16. Both *Herchen* and *Mihashi* view the frontside of the substrate, while in contrast, the claimed detection system disposed in the substrate support views the backside of the substrate. As such, *Mihashi* does not teach or suggest a modification to *Herchen* that would yield an endpoint detection system disposed in a substrate support member, as recited by claims 1 and 16. As such, a *prima facie* case of obviousness has not been established as the references fail to teach or suggest all the claimed elements.

Thus, Applicant submits that independent claims 1 and 16 and all claims depending therefrom are patentable over the combination of *Herchen* and *Mihashi*. Accordingly, the Applicant respectfully requests the rejection be withdrawn.

NEW CLAIM 28

The Applicant has added new claim 28. The Applicant believes that new claim 28 is fully supported by the specification and is patentable over the references of record. Thus, the Applicant submits that no new matter has been entered and respectfully request allowance of this claims.

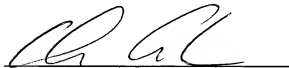
CONCLUSION

Applicants submit that all claims are in condition for allowance. Accordingly, the Applicants respectfully request reconsideration of this application and its early allowance.

If the Examiner believes that any unresolved issues still exist, it is requested that the Examiner telephone Mr. Keith Taboada at (732) 530-9404 so that appropriate arrangements can be made for resolving such issues as expeditiously as possible.

Respectfully submitted,

Sept 15, 2006



KEITH TABOADA, Attorney
Reg. No. 45,150
(732) 530-9404

Patterson & Sheridan, LLP
595 Shrewsbury Avenue
Suite 100
Shrewsbury, NJ 07702